1. Which are the top three variables in your model which contribute most towards the probability of a lead getting converted?

   Answer :

   The top three variables of the model which contribute most towards the probability of a lead getting converted are :
   a) Lead Origin_Lead Add Form
   b) Last Activity_Other_Activity
   c) Last Notable Activity_Unreachable

2. What are the top 3 categorical/dummy variables in the model which should be focused the most on in order to increase the probability of lead conversion?

   Answer :

   The top three 3 categorical/dummy variables in the model which should be focused the most are :
   a) Lead Origin
   b) Occupation
   c) Specialization

3. X Education has a period of 2 months every year during which they hire some interns. The sales team, in particular, has around 10 interns allotted to them. So during this phase, they wish to make the lead conversion more aggressive. So they want almost all of the potential leads (i.e. the customers who have been predicted as 1 by the model) to be converted and hence, want to make phone calls to as much of such people as possible. Suggest a good strategy they should employ at this stage.

   Answer :

   For such a situation, where the company could spare more number of calls, we could use the model with a low cut-off point as that of 0.2 which has a sensitivity or true positive rate of 91.8%.

	prob	accuracy	sensi	speci
0.0	0.0	0.381262	1.000000	0.000000
0.1	0.1	0.600649	0.968775	0.373813
0.2	0.2	0.731293	0.917680	0.616442
0.3	0.3	0.794991	0.838605	0.768116
0.4	0.4	0.805813	0.775750	0.824338
0.5	0.5	0.810142	0.701541	0.877061
0.6	0.6	0.790043	0.585564	0.916042
0.7	0.7	0.773964	0.501217	0.942029
0.8	0.8	0.749227	0.398621	0.965267
0.9	0.9	0.694960	0.222628	0.986007

	Converted	Converted_prob	Lead Number	predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	final_predicted
0	0	0.534875	1871	1	1	1	1	1	1	1	0	0	0	0	1
1	0	0.064794	6795	0	1	0	0	0	0	0	0	0	0	0	0
2	0	0.250655	3516	0	1	1	1	0	0	0	0	0	0	0	0
3	0	0.871365	8105	1	1	1	1	1	1	1	1	1	1	0	1
4	0	0.086006	3934	0	1	0	0	0	0	0	0	0	0	0	0

4. Similarly, at times, the company reaches its target for a quarter before the deadline. During this time, the company wants the sales team to focus on some new work as well. So during this time, the company's aim is to not make phone calls unless it's extremely necessary, i.e. they want to minimize the rate of useless phone calls. Suggest a strategy they should employ at this stage.

   Answer :

   For such a situation, where the company make phone calls unless it's extremely necessary, we could use the model with a high cut-off point as that of 0.6 which has a sensitivity or true positive rate of 58.6%.

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	prob	accuracy	sensi	speci
0.0	0.0	0.381262	1.000000	0.000000
0.1	0.1	0.600649	0.968775	0.373813
0.2	0.2	0.731293	0.917680	0.616442
0.3	0.3	0.794991	0.838605	0.768116
0.4	0.4	0.805813	0.775750	0.824338
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0.7	0.7	0.773964	0.501217	0.942029
0.8	0.8	0.749227	0.398621	0.965267
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	Converted	Converted_prob	Lead Number	predicted	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	final_predicted
0	0	0.534875	1871	1	1	1	1	1	1	1	0	0	0	0	1
1	0	0.064794	6795	0	1	0	0	0	0	0	0	0	0	0	0
2	0	0.250655	3516	0	1	1	1	0	0	0	0	0	0	0	0
3	0	0.871365	8105	1	1	1	1	1	1	1	1	1	1	0	1
4	0	0.086006	3934	0	1	0	0	0	0	0	0	0	0	0	0